In the Claims

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Original) A method for determining the presence of at least one analyte, comprising:

providing a sample comprising a plurality of aggregates of size of at least about 500 nm adsorbing a plurality of analytes;

exposing the sample to electromagnetic radiation to cause surface-enhanced emission;

obtaining spectral information of the sample, wherein at least one spectral line of the information represents a single analyte adsorbed on one of the plurality of aggregates; and

determining the presence of the single analyte from the at least one spectral line.

2. (Original) A method as in claim 1, the exposing step involving exposing the sample to electromagnetic radiation and causing Raman scattering of the sample, and the obtaining step comprising obtaining Raman information of the sample, wherein a single Raman line of the information represents the single analyte.

3. (Original) A method as in claim 1, wherein the sample is free of an emission-enhancing aid.

4. (Original) A method as in claim 1, wherein the spectral information is a surface-enhanced Raman spectrum, having an enhancement factor of at least about 10^{10}.

5. (Original) A method as in claim 1, wherein each aggregate of the plurality of aggregates comprises a plurality of metal particles.

6. (Original) A method as in claim 5, wherein the plurality of metal particles is selected from the group consisting of silver, gold and copper particles.

7. (Original) A method as in claim 6, wherein the aggregate is formed in situ by exposure to the electromagnetic radiation.

8. (Original) A method as in claim 1, wherein the plurality of aggregates is selected from the group consisting of colloids suspended in a medium, aggregates deposited on a substrate and lithography-produced metal aggregates.

9. (Original) A method as in claim 8, wherein the medium is selected from the group consisting of water, an organic solvent and a gel.

10. (Original) A method as in claim 8, wherein the substrate is selected from the group consisting of an electrode, a glass layer and a quartz layer.

11. (Original) A method as in claim 1, wherein the sample consists essentially of a plurality of aggregates of from about 500 nm to about 20 microns in dimension.

12. (Original) A method as in claim 1, wherein the electromagnetic radiation is non-resonant radiation.

13. (Original) A method as in claim 12, wherein the electromagnetic radiation is near infrared radiation.

14. (Original) A method as in claim 1, wherein the spectral information is Raman information that defines less than a complete Raman spectrum.

15. (Original) A method as in claim 14, wherein the spectral information is less than 5 Raman lines.

16. (Original) A method as in claim 14, wherein the spectral information is less than 2 Raman lines.

17. (Original) A method as in claim 1, wherein the spectral information is a single Raman line.

18. (Original) A method as in claim 1, wherein the single analyte is a dye.

19. (Original) A method as in claim 1, wherein the single analyte is selected from the group consisting of thymine, adenine, cytosine, guanine, and uracil.

20. (Original) A method as in claim 1, wherein the single analyte is selected from the group consisting of nucleotides and nucleosides.

21. (Original) A method as in claim 1, wherein the single analyte is a therapeutic agent.

22. (Original) A method as in claim 1, wherein the single analyte is a neurotransmitter.

23. (Original) A method for determining the presence of an analyte, comprising:

providing a sample comprising a plurality of aggregates adsorbing a plurality of analytes, wherein at least one aggregate of the plurality of aggregates comprises a metal cluster of at least seven particles and adsorbs only one analyte;

exposing the sample to electromagnetic radiation to cause surface-enhanced emission;

obtaining spectral information of the sample, wherein the only one analyte contributes to the spectral information; and

determining the presence of the only one analyte from the spectral information.

24. (Original) A method as in claim 23, the exposing step involving exposing the sample to electromagnetic radiation to cause Raman scattering, and the obtaining step involves obtaining a Raman spectrum of the sample, wherein the only one analyte contributes to at least one Raman signal of the Raman spectrum.

25. (Original) A method as in claim 23, wherein the plurality of aggregates comprises a metal cluster of at least ten particles.

26. (Original) A method as in claim 23, wherein the plurality of aggregates comprises a metal cluster of at least twenty particles.

27. (Original) A method as in claim 23, wherein the plurality of aggregates comprises a metal cluster of at least thirty-five particles.

28. (Original) A method as in claim 23, wherein the sample is free of an emission-enhancing aid.

29. (Original) A method as in claim 23, wherein the Raman spectrum is a surface-enhanced Raman spectrum, having an enhancement factor of at least 1010.

30. (Original) A method as in claim 23, wherein the metal particles are selected from the group consisting of silver, gold and copper particles.

31. (Original) A method as in claim 23, wherein the aggregate is formed in situ by exposure to the electromagnetic radiation.

32. (Original) A method as in claim 23, wherein the plurality of aggregates is selected from the group consisting of a colloids suspended in a medium, aggregates deposited on a substrate and lithography produced metal aggregates.

33. (Original) A method as in claim 32, wherein the medium is selected from the group consisting of water, an organic solvent and a gel.

34. (Original) A method as in claim 32, wherein the substrate is selected from the group consisting of an electrode, a glass layer and a quartz layer.

35. (Original) A method as in claim 23, wherein the at least one aggregate has a dimension of at least about 500 nm.

36. (Original) A method as in claim 23, wherein the electromagnetic radiation is non-resonant radiation.

37. (Original) A method as in claim 36, wherein the electromagnetic radiation is near infrared radiation.

38. (Original) A method as in claim 23, wherein the single analyte is a dye.

39. (Original) A method as in claim 23, wherein the single analyte is selected from the group consisting of thymine, adenine, cytosine, guanine, and uracil.

40. (Original) A method as in claim 23, wherein the single analyte is selected from the group consisting of nucleotides and nucleosides.

41. (Original) A method as in claim 23, wherein the single analyte is a therapeutic agent.

42. (Original) A method as in claim 23, wherein the single analyte is a neurotransmitter.

43. (Original) A method as in claim 23, wherein the sample consists essentially of aggregates of size of from about 500 nm to about 20 microns.

44. (Original) A method as in claim 23, wherein the at least one aggregate comprises a plurality of metal particles each having a dimension of no more than about 100 nm.

45. (Original) A method as in claim 23, wherein the at least one aggregate comprises a plurality of metal particles each having a dimension of no more than about 75 nm.

46. (Original) A method for determining the presence of an analyte, comprising:

providing a sample comprising a plurality of aggregates adsorbing a plurality of analytes, wherein each aggregate comprises a plurality of metal particles, each metal particle having a dimension of no more than about 100 nm and at least one aggregate adsorbs only one analyte;

exposing the sample to electromagnetic radiation to cause surface-enhanced emission;

obtaining spectral information of the sample, wherein the only one analyte contributes to the spectral information; and

determining the presence of the only one analyte from the spectral information.

47. (Original) A method as in claim 46, wherein the exposing step involves causing surface-enhanced emission and the obtaining step involves obtaining Raman spectral information.

48. (Original) A method as in claim 46, wherein the sample is free of an emission-enhancing aid.

49. (Original) A method as in claim 46, wherein the spectral information is a surface-enhanced Raman spectrum, having an enhancement factor of at least 1010.

50. (Original) A method as in claim 46, wherein the metal particles are selected from the group consisting of silver, gold and copper particles.

51. (Original) A method as in claim 46, wherein the aggregate is formed in situ by exposure to the electromagnetic radiation.

52. (Original) A method as in claim 46, wherein the plurality of aggregates is selected from the group consisting of a colloids suspended in a medium, aggregates deposited on a substrate and lithography produced metal aggregates.

53. (Original) A method as in claim 52, wherein the medium is selected from the group consisting of water, an organic solvent and a gel.

54. (Original) A method as in claim 52, wherein the substrate is selected from the group consisting of an electrode, a glass layer and a quartz layer.

55. (Original) A method as in claim 46, each metal particle having a dimension of no more than about 75 nm.

56. (Original) A method as in claim 46, wherein the electromagnetic radiation is non-resonant radiation.

57. (Original) A method as in claim 56, wherein the electromagnetic radiation is near infrared radiation.

58. (Original) A method as in claim 46, wherein the spectral information consists essentially of less than 5 lines of a Raman spectrum.

59. (Original) A method as in claim 46, wherein the single analyte is a dye.

60. (Original) A method as in claim 46, wherein the single analyte is selected from the group consisting of thymine, adenine, cytosine, guanine, and uracil.

61. (Original) A method as in claim 46, wherein the single analyte is selected from the group consisting of nucleotides and nucleosides.

62. (Original) A method as in claim 46, wherein the single analyte is a therapeutic agent.

63. (Original) A method as in claim 46, wherein the single analyte is a neurotransmitter.

64. (Original) A method for determining the presence of at least one analyte, comprising:

providing a sample comprising a plurality of aggregates, at least one aggregate adsorbing only one analyte that is free of an emission-enhancing aid;

exposing the sample to electromagnetic radiation; and

obtaining a spectrum, wherein the only one analyte contributes to at least one signal of the spectrum.

65. (Original) A method as in claim 64, wherein the spectrum is a surface-enhanced Raman spectrum, having an enhancement factor of at least 1010.

66. (Original) A method as in claim 64, wherein each aggregate of the plurality of aggregates comprises a plurality of metal particles.

67. (Original) A method as in claim 66, wherein the metal particles are selected from the group consisting of silver, gold and copper particles.

68. (Original) A method as in claim 64, wherein the plurality of aggregates is formed in situ by exposure to the electromagnetic radiation.

69. (Original) A method as in claim 64, wherein the plurality of aggregates is selected from the group consisting of a colloids suspended in a medium, aggregates deposited on a substrate and lithography produced metal aggregates.

70. (Original) A method as in claim 69, wherein the medium is selected from the group consisting of water, an organic solvent and a gel.

71. (Original) A method as in claim 69, wherein the substrate is selected from the group consisting of an electrode, a glass layer and a quartz layer.

72. (Original) A method as in claim 64, wherein the at least one aggregate has a dimension of at least about 500 nm.

73. (Original) A method as in claim 64, wherein the single analyte is a dye.

74. (Original) A method as in claim 64, wherein the single analyte is selected from the group consisting of thymine, adenine, cytosine, guanine, and uracil.

75. (Original) A method as in claim 64, wherein the single analyte is selected from the group consisting of nucleotides and nucleosides.

76. (Original) A method as in claim 64, wherein the single analyte is a therapeutic agent.

77. (Original) A method as in claim 64, wherein the single analyte is a neurotransmitter.

78. (Original) A method for determining the presence of a single analyte, comprising:

providing a sample comprising a plurality of surfaces, a portion of the plurality of surfaces adsorbing only one analyte; and

exposing the sample to electromagnetic radiation to cause the sample to emit radiation such that the sample is free of photobleaching.

79. (Original) A method as in claim 78, wherein the plurality of surfaces comprises a plurality of aggregates.

80. (Original) A method as in claim 79, wherein the plurality of aggregates comprises a plurality of metal particles.

81. (Original) A method as in claim 80, wherein the metal particles are selected from the group consisting of silver, gold and copper particles.

82. (Original) A method as in claim 79, wherein the plurality of aggregates is selected from the group consisting of a colloids suspended in a medium, aggregates deposited on a substrate and lithography produced metal aggregates.

83. (Original) A method as in claim 82, wherein the medium is selected from the group consisting of water, an organic solvent and a gel.

84. (Original) A method as in claim 82, wherein the substrate is selected from the group consisting of an electrode, a glass layer and a quartz layer.

85. (Original) A method as in claim 78, wherein the plurality of surfaces comprises a plurality of aggregates of metal particles, each of the metal particles having a dimension of no more than about 100 nm.

86. (Original) A method as in claim 78, wherein the only one analyte is a dye.

87. (Original) A method as in claim 78, wherein the only one analyte is selected from the group consisting of thymine, adenine, cytosine, guanine, and uracil.

88. (Original) A method as in claim 78, wherein the only one analyte is selected from the group consisting of nucleotides and nucleosides.

89. (Original) A method as in claim 78, wherein the only one analyte is a therapeutic agent.

90. (Original) A method as in claim 78, wherein the only one analyte is a neurotransmitter.

91. (Original) A method for determining the presence of at least one molecule, comprising providing at least one molecule, exposing the at least one molecule to electromagnetic radiation to cause Raman scattering, obtaining Raman spectral information and determining the presence of the at least one molecule from at least one anti-Stokes line.

92. (Original) A method as in claim 91, wherein the at least one molecule is adsorbed on a plurality of surfaces.

93. (Original) A method as in claim 91, wherein the at least one analyte is exposed to non-resonant radiation.

94. (Original) A method as in claim 92, wherein the electromagnetic radiation is near infrared radiation.

95. (Original) A method as in claim 94, wherein the near infrared radiation has a wavelength of at least 1000 nm.

96. (Original) A method for sequencing at least a portion of DNA or RNA, comprising:

cleaving the at least a portion of DNA or RNA into DNA or RNA fragments, wherein each fragment comprises at least one base;

allowing each DNA or RNA fragment to become surface-adsorbed;

exposing each fragment to electromagnetic radiation to cause surface-enhanced emission; and

obtaining unique surface-enhanced spectral information attributed to each fragment.

97. (Original) A method as in claim 96, wherein each fragment is surface-adsorbed onto one of a plurality of surfaces.

98. (Original) A method as in claim 97, wherein the plurality of surfaces is included in a moving stream.

99. (Original) A method as in claim 97, wherein the plurality of surfaces is selected from the group consisting of a plurality of aggregates suspended in a medium, a plurality of aggregates deposited on a substrate and lithography produced metal aggregates.

100. (Original) A method as in claim 99, wherein the plurality of aggregates comprise clusters of metal particles.

101. (Original) A method as in claim 100, wherein the metal particles are selected from the group consisting of silver, gold and copper particles.

102. (Original) A method as in claim 99, wherein the medium is selected from the group consisting of water, an organic solvent and a gel.

103. (Original) A method as in claim 100, wherein the substrate is selected from the group consisting of an electrode, a glass layer and a quartz layer.

104. (Original) A method as in claim 96, comprising allowing each fragment to become surface-absorbed on a plurality of protrusions and voids on a rough metal film.

105. (Original) A method as in claim 96, wherein the electromagnetic radiation is non-resonant radiation.

106. (Original) A method as in claim 96, wherein the electromagnetic radiation is near infrared radiation.

107. (Original) A method for general field enhancement, comprising providing a plurality of aggregates, exposing the plurality of aggregates to near infrared radiation and inducing at least one electromagnetic resonance in the plurality of aggregates to cause a surface-enhanced radiation.

108. (Original) A method as in claim 107, wherein the near infrared radiation has a wavelength of at least 1000 nm.

109. (Original) A method as in claim 107, wherein the plurality of aggregates comprises a plurality of metal particles.

110. (Original) A method as in claim 109, wherein the metal particles are selected from the group consisting of silver, gold and copper particles.

111. (Original) A method as in claim 107, wherein the aggregate is formed in situ by exposure to the electromagnetic radiation.

112. (Original) A method as in claim 107, wherein the plurality of aggregates is selected from the group consisting of colloids suspended in a medium, aggregates deposited on a substrate and lithography produced metal aggregates.

113. (Original) A method as in claim 112, wherein the medium is selected from the group consisting of water, an organic solvent and a gel.

114. (Original) A method as in claim 112, wherein the substrate is selected from the group consisting of an electrode, a glass layer and a quartz layer.

115. (Original) A method as in claim 109, wherein each metal particle has a dimension of no more than about 100 nm.

116. (Original) A method as in claim 109, wherein the plurality of aggregates comprises at least seven metal particles.

117. (Original) A method as in claim 107, wherein the surface enhanced radiation has an enhancement factor of at least 1010.

118. (Original) A method for selecting a spectral range, comprising:

providing a sample;

positioning at least one filter in association with an optical excitation and detection system, wherein the system is free of a spectrograph and the optical excitation system produces electromagnetic radiation in a first range;

exposing the sample to electromagnetic radiation via the system; and

obtaining a Raman spectrum of the sample having a second range wherein the second range is shifted from the first range.

119. (Original) A method as in claim 118, involving positioning at least two filters in association with the optical excitation and detection system.

120. (Original) A method as in claim 118, the positioning step involving positioning the at least one filter between a sample and detector of a Raman spectral system.

121. (Original) A method as in claim 118, wherein the second range is narrower than the first range.

122. (Original) A method for determining the presence of an analyte, comprising:

providing a sample comprising a rough metal film including a plurality of protrusions and indentations;

absorbing a plurality of analytes on a surface of the film;

exposing the sample to electromagnetic radiation to cause Raman scattering; and

obtaining a unique Raman signal attributed to a single analyte.

123. (Original) A system for determining the presence of at least one analyte, comprising:

a sample;

a source of electromagnetic radiation positioned to irradiate the sample; and

a detector positioned to detect surface-enhanced emission from the sample, wherein the sample comprises a plurality of aggregates of size of at least about 500 nm.

124. (Original) A system as in claim 123, wherein the sample comprises a plurality of aggregates of size of at least about 500 nm on a substrate.

125. (New) A method comprising:

a) sequentially removing nucleotides from one end of at least one nucleic acid;

b) attaching each nucleotide to at least one nanoparticle;

c) identifying said nucleotides; and

d) determining the sequence of said nucleic acid.

126. (New) The method of claim 125, wherein said nucleic acid is attached to a surface.

127. (New) The method of claim 125, wherein said nanoparticles comprise a modified surface.

128. (New) The method of claim 125, wherein said nucleotides are identified by surface enhanced Raman spectroscopy (SERS) and/or surface enhanced resonance Raman spectroscopy (SERRS).

129. (New) The method of claim 125, wherein said nanoparticles comprise gold and/or silver.

130. (New) The method of claim 129, wherein each nucleotide is attached to a single nanoparticle or a nanoparticle aggregate.

131. (New) The method of claim 125, further comprising separating said nucleotides from said nucleic acid molecule.

132. (New) The method of claim 128, further comprising exciting said nucleotides with a laser.

133. (New) The method of claim 132, wherein a charge coupled device (CCD) camera is used to identify said nucleotides.

134. (New) The method of claim 125, further comprising recording the identity of each nucleotide and the time at which each nucleotide is identified.

135. (New) The method of claim 125, wherein an exonuclease is used to remove said nucleotides from said nucleic acid.

136. (New) The method of claim 125, wherein said nanoparticles are between 10 nm and 20 micrometers in diameter.

137. (New) The method of claim 136, wherein said nanoparticles are about 100 nm in diameter.

138. (New) A method comprising:

a) obtaining nucleotides that are attached to Raman labels;

b) providing a nucleic acid comprising labeled nucleotides;

c) removing nucleotides from one end of the nucleic acid;

d) identifying nucleotides by Raman spectroscopy; and

e) determining the sequence of the nucleic acid.

139. (New) The method of claim 138, further comprising passing the nucleotides removed from the nucleic acid in a stream.

140. (New) The method of claim 138, wherein each type of nucleotide is labeled with a Raman label.

141. (New) The method of claim 138, comprising labeling thymine.

142. (New) The method of claim 138, comprising labeling adenine.

143. (New) The method of claim 138, comprising labeling cytosine.

144. (New) The method of claim 138, comprising labeling guanine.

145. (New) The method of claim 138, comprising labeling uracil.

146. (New) The method of claim 138, wherein said nucleotides are removed from said nucleic acid by exonuclease activity.

147. (New) The method of claim 146, wherein only one nucleic acid at a time is exposed to exonuclease activity.

148. (New) The method of claim 138, wherein said nucleotides are identified by surface enhanced Raman spectroscopy (SERS) and/or surface enhanced resonance Raman spectroscopy (SERRS).

149. (New) The method of claim 148, further comprising attaching said nucleotides to nanoparticles.

150. (New) An apparatus comprising:

a) a reaction site for immobilizing a DNA fragment onto an aggregate;

b) a first channel carrying a liquid stream, the first channel in fluid communication with said reaction site;

c) a second channel carrying the liquid stream, the second channel in fluid communication with said first channel;

d) a detection site in fluid communication with said first and second channels; and

e) a detection unit operably coupled to said detection site.

151. (New) The apparatus of claim 150, wherein said detection unit comprises a Raman detector.

152. (New) The apparatus of claim 151, wherein said detection unit comprises a laser and a CCD camera.

153. (New) A method comprising:

a) sequentially removing nucleotides from one end of at least one nucleic acid;

b) moving the nucleotides in a stream packed with nanoparticles;

c) identifying the nucleotides by Raman spectroscopy; and

d) determining the sequence of the nucleic acid.

154. (New) The method of claim 153, wherein the nucleotides are removed from the nucleic acid by exonuclease activity.

155. (New) The method of claim 153, further comprising attaching said nucleic acid to a surface.

156. (New) The method of claim 155, wherein said nucleic acid is immobilized in a reaction site.

157. (New) The method of claim 156, wherein a single nucleic acid is immobilized in said reaction site.

158. (New) The method of claim 153, wherein said nucleotides are identified by surface enhanced Raman spectroscopy (SERS) and/or surface enhanced resonance Raman spectroscopy (SERRS).

159. (New) The method of claim 153, wherein at least two nanoparticles are cross-linked together.

160. (New) The method of claim 153, wherein the nanoparticles comprise gold and/or silver, said nanoparticles between about 10 nm and 20 micrometers in size.

161. (New) The method of claim 160, wherein the size of said nanoparticles is selected from the group consisting of about 10 to 50 nm, about 10 to 100 nm, about 10 nm and about 500 nm.

162. (New) A method comprising:

a) preparing a nucleic acid comprising labeled nucleotides;

b) sequentially removing nucleotides from one end of the nucleic acid;

c) moving the nucleotides in a stream packed with nanoparticles;

d) identifying the nucleotides by Raman spectroscopy; and

e) determining the sequence of the nucleic acid.

163. (New) The method of claim 162, wherein said nucleotides are labeled with one or more Raman labels.

164. (New) The method of claim 163, wherein each type of nucleotide is labeled with a distinguishable Raman label.

165. (New) The method of claim 163, comprising labeling thymine.

166. (New) The method of claim 163, comprising labeling adenine.

167. (New) The method of claim 163, comprising labeling cytosine.

168. (New) The method of claim 163, comprising labeling guanine.

169. (New) The method of claim 163, comprising labeling uracil.

170. (New) The method of claim 162, further comprising separating said nucleotides from said nucleic acid.

171. (New) The method of claim 162, further comprising recording the time at which each nucleotide passes through said channel.

172. (New) The method of claim 13, wherein each type of nucleotide produces a unique Raman signal.

173. (New) An apparatus comprising:

a) a reaction site for immobilizing a DNA fragment onto an aggregate;

b) a first channel carrying a liquid stream, the first channel in fluid communication with said reaction site;

c) a second channel carrying the liquid stream, the second channel in fluid communication with said first channel;

d) a multiplicity of nanoparticles in said second channel; and

e) a Raman detector operably coupled to said second channel.

174. (New) The apparatus of claim 173, wherein said Raman detector comprises a laser and/or a CCD camera.

175. (New) The apparatus of claim 173, further comprising a first electrode and a second electrode, said electrodes to move nucleotides from said first channel into said second channel.

176. (New) The apparatus of claim 173, wherein said nanoparticles are cross-linked together.

177. (New) The apparatus of claim 176, wherein said cross-linked nanoparticles provide an enhanced Raman signal.

178. (New) The apparatus of claim 173, said detector to detect nucleotides by surface enhanced Raman spectroscopy (SERS) and/or surface enhanced resonance Raman spectroscopy (SERRS).

179. (New) A method comprising:

a) removing one or more nucleotides from a nucleic acid;

b) attaching each of the one or more nucleotides to at least one nanoparticle;

c) identifying said nucleotides; and

d) determining the sequence of said nucleic acid.

180. (New) The method of claim 179, wherein said nanoparticles comprise a modified surface.

181. (New) The method of claim 179, wherein said nucleotides are identified by surface enhanced Raman spectroscopy (SERS) and/or surface enhanced resonance Raman spectroscopy (SERRS).

182. (New) The method of claim 179, wherein said nanoparticles comprise gold and/or silver.

183. (New) The method of claim 179, wherein each nucleotide is attached to a single nanoparticle or a nanoparticle aggregate.

184. (New) The method of claim 179, further comprising exciting said nucleotides with a laser.

185. (New) The method of claim 184, wherein a charge coupled device (CCD) camera is used to identify said nucleotides.

186. (New) The method of claim 179, further comprising recording the identity of each nucleotide and the time at which each nucleotide is identified.

187. (New) The method of claim 179, wherein said nanoparticles are between 10 nm and 20 micrometers in diameter.

188. (New) A method comprising:

a) removing one or more nucleotides from a nucleic acid;

b) identifying each of the one or more nucleotides by Raman spectroscopy; and

c) determining the sequence of the nucleic acid.

189. (New) The method of claim 188, wherein each type of nucleotide is labeled with a Raman label.

190. (New) The method of claim 188, comprising labeling thymine.

191. (New) The method of claim 188, comprising labeling adenine.

192. (New) The method of claim 188, comprising labeling cytosine.

193. (New) The method of claim 188, comprising labeling guanine.

194. (New) The method of claim 188, comprising labeling uracil.

195. (New) The method of claim 188, wherein said nucleotides are identified by surface enhanced Raman spectroscopy (SERS) and/or surface enhanced resonance Raman spectroscopy (SERRS).